

## **REMARKS**

### **Amendments**

Claims 1, 3, and 5-12 are pending upon entry of the foregoing amendments. Claims 13-20 have been withdrawn after election of claims 1-12 with traverse in response to the Examiner's restriction requirement. Claim 1 has been amended to correct the antecedent basis of the hydrocarbon fuel and claim 10 has been amended to correct the antecedent basis of the catalyst support and the promoter. Claim 1 also has been amended to include the limitations of dependent claims 2 and 4. Accordingly, claims 2 and 4 have been cancelled. Reconsideration of the present application, as amended, and allowance of the pending claims is respectfully requested in view of the following remarks.

### **Rejection Under 35 U.S.C. § 112**

The Examiner rejected claims 1-12 under 35 U.S.C. § 112, second paragraph, as being indefinite. Applicants have amended the claims to address the insufficient antecedent basis in claim 1 and claim 10. Upon entry of the foregoing amendments, the rejection is moot.

### **Rejection Under 35 U.S.C. § 102**

The Examiner rejected claims 1, 2, 4-6, and 11 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 4,182,795 to Baker et al. (hereinafter "Baker"). The Examiner also rejected claims 1, 3, 6-9, 11, and 12 under 35 U.S.C. § 102(e) as being anticipated by U.S. Publication No. 2005/0053819 to Paz (hereinafter "Paz"). The rejections are respectfully traversed.

The Examiner has failed to establish a *prima facie* case of anticipation because the cited prior art references do not disclose each and every element of the Applicant's claimed invention.

Baker describes a fuel cell having defined passages for thermal control. The fuel cell comprises separator plates that divide the channels for supplying a fuel gas to the anode and oxidant to the cathode a passage from channels that are isolated from contact with the electrolyte for thermal control purposes. Col. 4, Lines 23-58. Baker does not disclose that the anodic interconnect comprises a metallic substrate. Baker merely discloses that the "separator plate" comprises an "integral sheet material." Col. 8, Lines 22-25. Nor does Baker disclose that the fuel gas flows over at least a portion of the anode and a catalytic coating on the metallic substrate.

Paz describes solid oxide fuel cell interconnects coated with a catalyst capable of reforming a hydrocarbon fuel. Paz does not disclose that the anodic interconnect has an offset plate fin or dimple configuration. Nor does Paz disclose that the metallic substrate of the anodic interconnect has uncoated portions that are electrically connected to the anode and anodic current collector and coated portions with a catalyst in contact with a fuel gas flow.

Accordingly, the rejections are unsupported by the prior art and must be withdrawn.

**Rejection Under 35 U.S.C. § 103**

The Examiner rejected claims 2, 4, 5, and 10 under 35 U.S.C. § 103(a) as being obvious over Paz in view of U.S. Patent No. 4,567,117 to Patel et al. (hereinafter "Patel") and further in view of U.S. Patent No. 5,660,941 to Farooque et al. (hereinafter "Farooque"). The rejections are respectfully traversed.

The Examiner has failed to establish a *prima facie* case of obviousness because the cited prior art references do not disclose each and every element of the Applicant's claimed invention. Specifically, Paz does not remotely teach or suggest the desirability of having an interconnect with an offset plate fin or dimple configuration as required by the Applicant's claimed invention. Applicants teach that the offset fin and dimple configuration is particularly beneficial because it "constantly redistributes the fuel gas and reformat flow pattern and improves the mass transfer from gas phase to the surface of the anode." Thus, Paz's teaching that the particular configuration of the grooves is not critical to the invention directly contradict Applicants' claimed invention.

Moreover, neither the disclosure of Patel nor Farooque is sufficient to overcome Paz's deficiencies. Farooque merely teaches that a catalyst member comprised on an expanded metal or wire screen may have openings that are enlarged to support catalyst pellets. Farooque does not remotely teach or suggest use of an offset or dimpled design with portions both coated and uncoated with a catalyst. Nor do Paz or Farooque remotely teach or suggest the desirability of modifying Paz to obtain an offset or dimpled fin design having uncoated portions for electrical connection to the electrode and current collection and catalytically coated portions for catalyzing conversion of a hydrocarbon fuel to a hydrogen rich reformat.


### CONCLUSION

For the foregoing reasons, Applicants submit that claims 1, 3, and 5-12 are both novel and patentable over the cited prior art. Allowance of the pending amended claims is earnestly solicited.

If there are any issues which can be resolved by a telephone interview or with an examiner's amendment, the Examiner is invited to telephone the undersigned at 404.853.8012.

Respectfully submitted,

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